

FIG. 1A

**Variables Maintained At A Node**

No.	Variable	Description	Type	Value
1	ID	Node identifier	Integer	1-N
2	Direction	Identifier for the ring	Binary	UPSTREAM/DOWNSTREAM
3	LPR <Direction>	Last packet received from <Direction>	PACKET	
4	LPT <Direction>	Last packet transmitted in <Direction>	PACKET	
5	PMSN <Direction>	Permission to transmit in <Direction>	Binary	ENABLE/DISABLE
6	TR <Direction>	Transmission Round in <Direction>	Binary	ODD/EVEN
7	TBR <Direction>	Transit Buffer Round in <Direction>	Binary	ODD/EVEN
8	TBTH <Direction>	Transit Buffer Threshold in <Direction>	Integer	
9	NPQCR <Direction>	Number of packets queued in current TBR <Direction>	Integer	0 Transit Buffer Size
10	NPTCR <Direction>	Number of packets transmitted in current TR <Direction>	Integer	

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**FIG. 1B**

Packet Fields (Excluding Payload)

No.	Variable	Description	Type	Value
1	Pkt.Src	Source Identifier	Integer	1-N
2	Pkt.Dst	Destination identifier	Integer	
3	Pkt.PMSN	Permission to transmit in the opposite direction	Binary	ENABLED/DISABLE
4	Pkt.Round	Transmission round of the packet	Binary	ODD/EVEN

FIG. 1C

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Changes To The Variables Maintained At The Node 100A

Time	(Pkt.Dst, Pkt.Round)	(NPQCR, TBR)	Packet that is queued in Transit Buffer 104A or 104B	(LPR.Dst, LPR.Round)
0		(0, ODD)	—	(—, —)
1	(2, ODD)	(0, ODD)	—	(2, ODD)
2	(5, ODD)	(1, ODD)	(5, ODD)	(5, ODD)
3	(7, ODD)	(2, ODD)	(7, ODD)	(7, ODD)
4	(2, EVEN)	(0, EVEN)	—	(2, EVEN)
5	(2, EVEN)	(0, EVEN)	—	(2, EVEN)
6	—	(0, EVEN)	—	(2, EVEN)
7	(5, ODD)	(1, EVEN)	(5, EVEN)	(5, ODD)
8	(7, EVEN)	(1, ODD)	(7, ODD)	(7, EVEN)

FIG. 1D

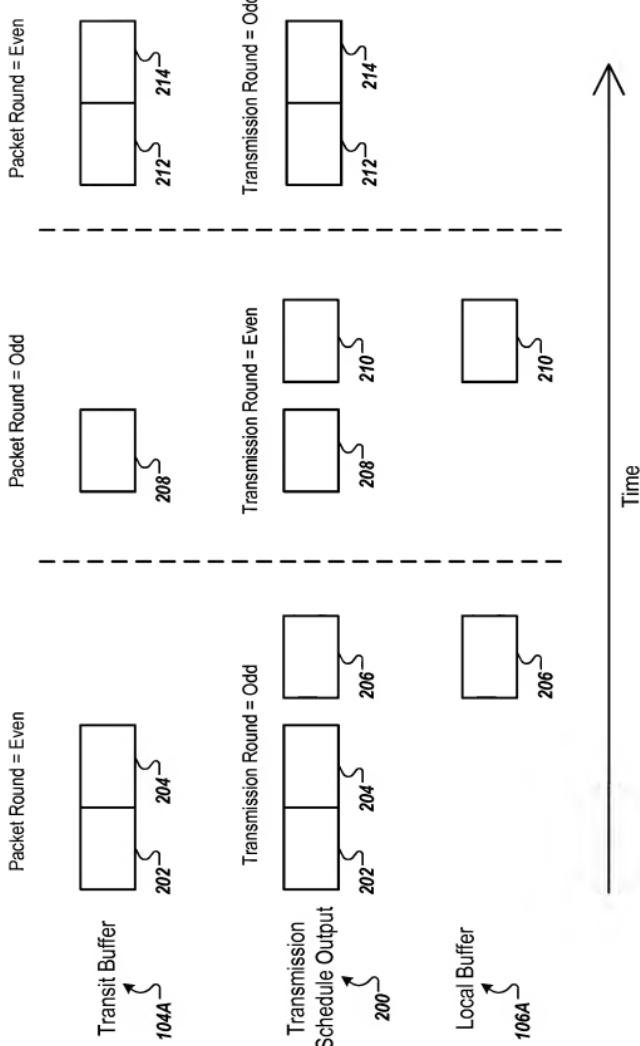


FIG. 2

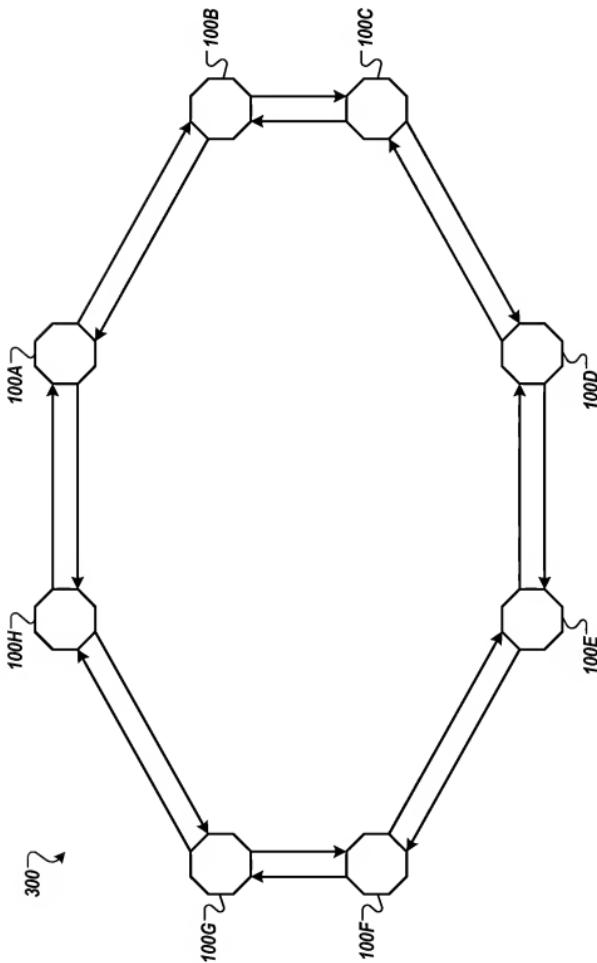


FIG. 3

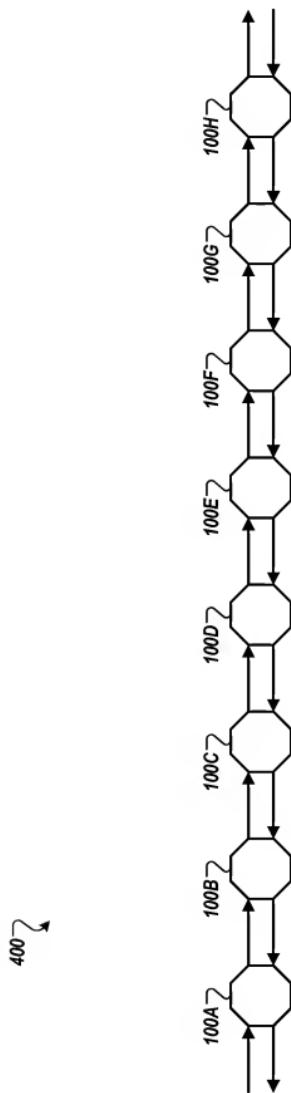


FIG. 4

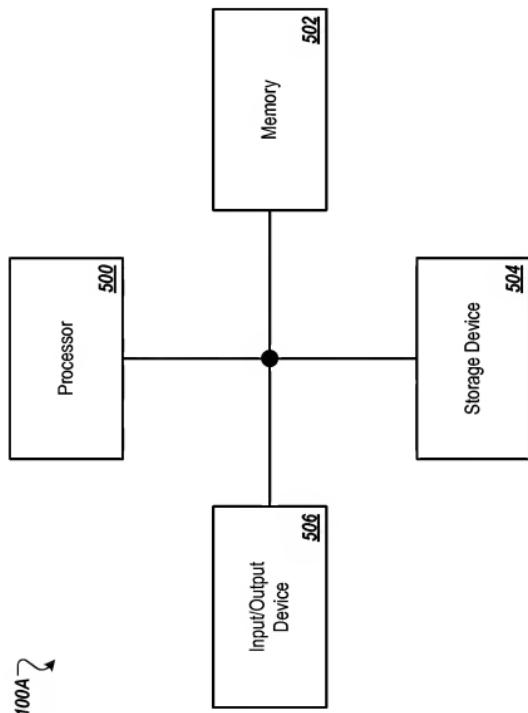


FIG. 5